



# Ridin' Herd

► by **Rick Rasby**, beef specialist, University of Nebraska

## Plan to reduce feed costs

*Profitable cow-calf producers tend to have three important items in line with one another: weaning weight in line with reproductive rate in line with cost of producing a weaned calf.*

### Finding balance

Weaning weight and reproductive rate will likely not be maximum, but rather optimum given the feed, labor and capital resources available. In addition, maximizing the use of winter and summer grazing opportunities and using harvested and commercial feeds at the “proper” time are important in making the cow-calf enterprise profitable.

There may be times that a producer will need to spend money to make money. As an example, if the forage being grazed or fed doesn't meet the crude protein (CP) requirement, then purchasing a protein supplement will result in cows meeting their nutrient needs. Body condition can be managed to not have a negative impact on reproductive performance.

### Purchasing supplements on a pound-of-nutrient basis

Protein and energy supplements are designed to fill the gap for deficiencies in crude protein or energy content of the base diet. For beef cows, the base diet is almost always forage, grazed or fed. The objective of a good supplementation program should be to supply the required amount of protein or energy rather than a specific amount of supplement.

Therefore, when choosing among various supplements, a good strategy is to calculate the cost of each supplement on a cost per pound of nutrient in the supplement then purchase the supplement that is the most economical.

To calculate cost per pound of nutrient, simply divide the cost per ton of the supplement by the number of pounds of nutrient in a ton of the supplement. This assumes that all supplements are similar in moisture content. The result is the cost per pound of nutrient [example: CP or total digestible nutrients (TDN)]. When all supplement options are priced on a cost per pound of nutrient, the most economical supplement can be identified.

**Hay loss and waste can be reduced by feeding hay daily according to ration needs. Cattle will waste less hay when the amount fed is limited to what is needed in a single day.**

There are other factors to consider when purchasing supplements. With today's fuel and labor costs, purchasing a supplement with a greater concentration of nutrient may decrease delivery cost because fewer tons would be needed to supply the same amount of protein.

Supplements may differ in the amount of waste that results when they are fed or delivered. For example, alfalfa hay does not cost the same amount to deliver to cattle and results in more waste than feeding cubes, but it may still be the more economical supplement. Producers can easily account for cost differences in transportation, feeding and waste in addition to purchase price of various supplements by using the “Feed Cost Calculator” found on the web at <http://extension.unl.edu/statewide/westcentral/ag-economics/>. Click on “Feed Cost Cow-Q-Lator.” Excel is needed to open the spreadsheet.

### Proper sampling is key

Forage-testing laboratories will not accept a “grab” sample of a baled forage. Sample baled hay using a forage probe. Most extension offices will have a forage probe. If they don't, they will know where you can find one. A forage probe is essential for collecting a representative sample.

For large round and square bales, the probe should penetrate at least 18 inches into the bale and have an internal diameter of at least 3/8-inch (in.). If the probe is 18

in. long or longer, 15 large round bales should be adequate if the “lot” size is 30 to 40 bales. Collect one sample from each bale by coring straight in from the center of the end of square bales and from the wrapped circumference of round bales.

Get a representative sample for each “lot” of hay. Different cuttings of alfalfa need to be sampled separately. Early-season cut grass hay should be sampled separately from hay cut in the middle of the season and late in the season.

Grass hays harvested at different locations need to be sampled separately. Place the entire sample from each “lot” into a plastic bag and seal tightly. For loose or compressed hay stacks, use a hay probe at least 24 in. long to collect 15 or more samples from each “lot.” Label the sample bag with your name, address, lot ID and type of material. Most testing labs provide a description sheet to report this information and to request the desired tests.

Place samples in polyethylene freezer bags, squeeze the air out of the bag, and seal tightly. Use extra caution if subdividing a large hay sample because subsampling dry hay can result in loss of fines and leaves. Freeze samples containing greater than 15% moisture until shipping; store dry samples in a cool location.

### Hay feeding frequency and amount

Hay loss and waste can be reduced by feeding hay daily according to ration needs. Compared to feeding a several-day supply each time hay is provided, daily feeding will force livestock to eat hay they might otherwise refuse, overconsume, trample and waste. Cattle will waste less hay when the amount fed is limited to what is needed in a single day.

One-fourth more hay is needed when a four-day supply of hay is fed with free access compared to when a one-day supply is fed. Excessive hay consumption can be a major problem when large hay packages are fed without restriction.

A dry, pregnant cow can eat and waste up to 15%-20% more hay than her needs when allowed free access to good-quality hay. A dry cow that is 1,200 lb. requiring 27 lb. of hay daily as is, with free access to the forage could consume and waste 31 lb. daily. This

CONTINUED ON PAGE 68

can amount to almost 500 lb. per cow over a four-month feeding period for spring-calving cows. A 100-cow herd may overconsume 24 tons of hay if the cows have free access to hay.

Dry-matter losses can occur when handling hay from field to feeding. By the time the hay is fed, losses can be substantial and can essentially increase the amount of production needed from the original standing crop by 35%.

By effectively controlling the amount of hay lost and wasted during harvest, storage

and feeding, production costs can be reduced and hay making can be made more profitable.

### **Final thought**

This will be my final "Ridin' Herd." I enjoyed this opportunity, and writing this column allowed me to connect with a national audience. The objective was to connect nutrition to cow and calf performance, mainly reproductive performance for beef females, and address strategies to manage costs. Through this

column I was able to share research results from Nebraska and surrounding states. It was a pleasure working with Shauna and her group. They are really good at what they do.



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